

I Claim:

sub A9 1. A method for creating a dummy metal fill pattern near functional circuitry, comprising:

- 2 a. creating a margin area around the functional circuitry;  
3 b. trimming a dummy fill pattern to the margin area to create a trimmed fill pattern; and  
4 c. overlaying said trimmed fill pattern and the functional circuitry.

sub 67 2. The method for creating a dummy metal fill pattern of claim 1, and further including:  
2 removing excess metal between step b and step c.

1 3. The method for creating a dummy metal fill pattern of claim 2, wherein:  
2 the excess metal is at least one metal sliver.

1 4. The method for creating a dummy metal fill pattern of claim 3, wherein:  
2 the metal sliver is a thin strip of metal created when the margin area is removed from the  
3 dummy fill pattern.

1 5. The method for creating a dummy metal fill pattern of claim 1, wherein:  
2 the dummy fill pattern is an example of an alternative functional circuitry.

sub A9 1 6. The method for creating a dummy metal fill pattern of claim 5, wherein:  
2 the alternative functional circuitry is selected to be alike to that near the functional  
3 circuitry.

1 7. The method for creating a dummy metal fill pattern of claim 5, wherein:  
2 the alternative functional circuitry is a selected portion of functional circuitry from a metal  
3 layer on which the dummy metal fill pattern is to be used.

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8. The method for creating a dummy metal fill pattern of claim 1, wherein:  
the dummy metal fill pattern is created on a metal layer of an LCOS array.

1 9. The method for creating a dummy metal fill pattern of claim 1, wherein:  
2 the dummy metal fill pattern is created on a layer under a mirror layer of an LCOS array.

1 10. The method for creating a dummy metal fill pattern of claim 1, wherein:  
2 the dummy metal fill pattern is created on a layer of a reflective LCOS array.

1 11. The method for creating a dummy metal fill pattern of claim 1, and further including:  
2 selecting a fill metal pattern between step a and step b.

1 12. The method for creating a dummy metal fill pattern of claim 11, wherein:  
2 the fill metal pattern is selected to be a pattern of alternative functional circuitry.

1 13. The method for creating a dummy metal fill pattern of claim 1, wherein:  
2 said margin area is created by growing the area of the functional circuitry.

1 14. A metal fill pattern comprising:  
2 a first circuitry pattern;  
3 a margin area around said first circuitry pattern; and  
4 a second circuitry pattern, wherein:  
5 said second circuitry pattern is trimmed to avoid the margin area.

1 15. The metal fill pattern of claim 13, wherein:  
2 the first circuitry pattern is functional circuitry.

1 16. The metal fill pattern of claim 14, wherein:  
2 the second circuitry pattern is electrically non-functional.

1 17. The metal fill pattern of claim 14, wherein:  
2 the second circuitry pattern is selected to be a functional circuitry pattern located near the  
3 first circuitry pattern on a metal layer.

1 18. The metal fill pattern of claim 14, wherein:  
2 said first circuitry pattern and said second circuitry pattern are patterns on a metal layer of a  
3 reflective LCOS array.

1 19. The metal fill pattern of claim 14, wherein:  
2 said first circuitry pattern and said second circuitry pattern are patterns on a single metal  
3 layer of a reflective LCOS array.

1 20. The metal fill pattern of claim 14, wherein:  
2 at least one is artifact removed from the second circuitry pattern.

1 21. The metal fill pattern of claim 20, wherein:  
2 the artifact includes a metal sliver remaining after said second circuitry pattern is trimmed.

1 22. The metal fill pattern of claim 14, wherein:  
2 the second circuitry pattern is a functional circuitry pattern which is used as dummy fill  
3 metal.

1 23. A method for providing dummy fill in a LCOS array, comprising:  
2 selecting a metal fill pattern from functional circuitry on a layer of the array; and  
3 filling an unfilled area with the metal fill pattern.

1 24. The method for providing dummy fill of claim 23, and further including:  
2 filling a partially filled area with a portion of the metal fill pattern.

NOTICE: This correspondence chart is provided for informational purposes only. It is not a

15 part of the official Patent Application.

CORRESPONDENCE CHART

10	METHOD FOR CREATING DUMMY FILL METAL
20	11 REFLECTIVE LCOS ARRAY
	12 MATERIAL LAYERS
	14 MIRROR LAYER
	16 M1 METAL LAYER
	18 M2 METAL LAYER
25	20 M3 METAL LAYER
	22 POLY LAYER
	24 DIFFUSION LAYER
	26 SEMICONDUCTOR JUNCTION
	28 INSULATING LAYERS
30	29 CIRCUITRY AREA
	31 UNFILLED AREA
	30 PORTION OF EXAMPLE METAL LAYER
	32 FUNCTIONAL CIRCUITRY
	34 MARGIN AREA
35	38 FILL AREA
	40 FUNCTIONAL CIRCUITRY AREA
	50 METAL FILL PATTERN
	52 FILL METAL TRACES
	54 UNFILLED SPACE
40	55 SELECT METAL FILL PATTERN OPERATION
	56 MODIFY METAL FILL PATTERN OPERATION
	57 FILL UNFILLED AREAS OPERATION
	58 FILL PARTIALLY FILLED AREAS OPERATION

- 59 GROW MARGIN AREA OPERATION
- 45 60 TRIM DOWN TO MARGIN OPERATION
- 62 FIRST TRIMMED FILL PATTERN
- 64 FIRST TRIMMED METAL TRACES
- 66 METAL SLIVER
- 70 REMOVE DUMMY SLIVERS OPERATION
- 50 72 SECOND TRIMMED FILL PATTERN
- 74 SECOND TRIMMED METAL TRACES
- 76 COMPLETED METAL TRACE PATTERN
- 78 OVERLAY FUNCTIONAL AND DUMMY PATTERNS OPERATION